

chargers, power supplies, storage devices configured to store audio, video, pictures and data, earphones, and microphones, among others. The interface unit **170** may be configured using a wired and wireless data port, a card socket for coupling to a memory card, subscriber identity module (SIM) card, user identity module (UIM) card, removable user identity module (RUIM) card), audio input/output ports and video input/output ports.

[0037] The output unit **150** generally includes various components which support the output requirements of the mobile terminal. Display **151** is typically implemented to visually display information associated with the mobile terminal **100**. For example, if the mobile terminal is operating in a phone call mode, the display will generally provide a user interface or graphical user interface which includes information associated with placing, conducting, and terminating a phone call. As another example, if the mobile terminal **100** is in a video call mode or a photographing mode, the display **151** may additionally or alternatively display images which are associated with these modes.

[0038] One particular implementation includes the display **151** configured as a touch screen working in cooperation with an input device, such as a touchpad. This configuration permits the display to function both as an output device and an input device.

[0039] The display **151** may be implemented using known display technologies including, a liquid crystal display (LCD), a thin film transistor-liquid crystal display (TFT-LCD), an organic light-emitting diode display (OLED), a flexible display and a three-dimensional display. The mobile terminal may include one or more displays. An example of a two-display embodiment is one in which one display is configured as an internal display, viewable when the terminal is in an opened position. A second display may be configured as an external display, viewable in both the open and closed positions.

[0040] FIG. 1 further illustrates output unit **150** having an audio output module **152** which supports the audio output requirements of the mobile terminal **100**. The audio output module is often implemented using one or more speakers, buzzers, other audio producing devices, and combinations thereof. The audio output module functions in various modes including call-receiving mode, call-placing mode, recording mode, voice recognition mode and broadcast reception mode. During operation, the audio output module **152** outputs audio relating to a particular function, e.g., call received, message received, and errors.

[0041] The output unit **150** is further illustrated having an alarm **153**, which is commonly used to signal or otherwise identify the occurrence of a particular event associated with the mobile terminal. Typical events include call received, message received and user input received. An example of such output includes providing vibrating tactile sensations to a user. The alarm **153** may be configured to vibrate responsive to the mobile terminal receiving a call or message. As another example, vibration is provided by alarm **153** responsive to receiving user input at the mobile terminal, thus providing a tactile feedback mechanism. It is understood that the various output provided by the components of output unit **150** may be separately performed, or the output may be performed using any combination of the components.

[0042] The memory **160** is generally used to store various types of data to support the processing, control, and storage requirements of the mobile terminal. Examples of such data

include program instructions for applications operating on the mobile terminal, contact data, phonebook data, messages, pictures and video. The memory **160** illustrated in FIG. 1 may be implemented using any type or combination of suitable volatile and non-volatile memory or storage devices including random access memory (RAM), static random access memory (SRAM), electrically erasable programmable read-only memory (EEPROM), erasable programmable read-only memory (EPROM), programmable read-only memory (PROM), read-only memory (ROM), magnetic memory, flash memory, magnetic or optical disk, card-type memory, or other similar memory or data storage device.

[0043] The controller **180** typically controls the overall operations of the mobile terminal. The controller performs the control and processing associated with voice calls, data communications, video calls, camera operations and recording operations. If desired, the controller may include a multimedia module **181** which provides multimedia playback. The multimedia module **181** may be configured as part of the controller **180**, or this module may be implemented as a separate component.

[0044] The power supply **190** provides power required by the various components for the portable device. The provided power may be internal power, external power, or combinations thereof.

[0045] Various embodiments described herein may be implemented in a computer-readable medium using, for example, computer software, hardware, or some combination of both. For a hardware implementation, the embodiments described herein may be implemented within one or more application specific integrated circuits (ASICs), digital signal processors (DSPs), digital signal processing devices (DSPDs), programmable logic devices (PLDs), field programmable gate arrays (FPGAs), processors, controllers, micro-controllers, microprocessors, other electronic units designed to perform the functions described herein, or a selective combination thereof. In some cases, such embodiments are implemented by controller **180**.

[0046] For a software implementation, the embodiments described herein may be implemented with separate software modules, such as procedures and functions, each of which perform one or more of the functions and operations described herein. The software codes can be implemented with a software application written in any suitable programming language and may be stored in memory **160**, and executed by a controller or processor **180**.

[0047] Mobile terminal **100** may be implemented in a variety of different configurations. Examples of such configurations include folder-type, slide-type, bar-type, rotational-type, swing-type and combinations thereof. For clarity, further disclosure will primarily relate to a slide-type mobile terminal. However such teachings apply equally to other types of terminals.

[0048] FIG. 2 illustrates a perspective view of a front side of a mobile terminal according to an embodiment of the present invention. In FIG. 2, the mobile terminal **100** is shown having a first body **200** configured to slideably couple with a second body **205**. The user input unit **130**, described in FIG. 1, is implemented using function keys **210** and keypad **215**. The function keys **210** are associated with the first body **200**, and the keypad **215** is associated with the second body **205**. The keypad includes various number, character, and symbol keys to enable a user to place a call, prepare a text or multimedia message, and otherwise operate the mobile terminal.